

**Notice of Allowability**

Application No.

09/465,690

Examiner

Andre Boyce

Applicant(s)

LEAMON ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicant's amendment filed October 3, 2005.
2. ☒ The allowed claim(s) is/are 1,4-9 and 13-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☒ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
TARIQ R. HAFIZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600

## **DETAILED ACTION**

### ***Response to Amendment***

1. This office action is in response to Applicant's amendment filed October 3, 2005. Claims 1, 4-9, and 19 have been amended. Claims 1, 4-9, and 13-20 are pending.
2. The previously pending rejections to claims 1, 4-9, and 19 under 35 U.S.C. 101 have been with drawn.

### ***Reasons for Allowance***

3. Claims 1, 4-9, and 13-20 are allowed.
4. The following is an examiner's statement of reasons for allowance:

With respect to independent claims 1, 19, and 20, none of the prior art of record, taken individually or in any combination, teach inter alia, performing the following sub-steps on an iterative basis, from a highest ranked agent to a lowest ranked agent: for each agent that is available to be assigned to a current agent, performing the following substeps: for the current agent, for each factor, determining a difference value between a current schedule and the current agent's preference for that factor; assigning the difference value for each factor to a bit range within a vector for the current agent and current schedule, wherein the factor having the highest importance is assigned to a highest order bits of the vector and remaining factors are assigned to subsequent orders of bits in an assigned order of importance, wherein the vector represents a numerical value that indicates how well

the current schedule fits the current agent's preferences, and assigning to the current agent the schedule having the lowest numerical value.

The prior art references most closely resembling Applicant's claimed invention are Gabriner et al (USPN 5,848,403), Andre et al (USPN 6,278,978), and Fields et al (USPN 5,111,391).

Gabriner et al disclose a scheduling system used to determine a schedule for a group of resources to perform a group of tasks. Further, Gabriner et al disclose soft constraints (i.e., rules and preferences) in a scheduling system considered in producing schedules, and a resource bit array 30 includes an ordered set of bits, wherein a predetermined index indicates a resource capability. However, Gabriner et al does not disclose performing the following sub-steps on an iterative basis, from a highest ranked agent to a lowest ranked agent: for each agent that is available to be assigned to a current agent, performing the following substeps: for the current agent, for each factor, determining a difference value between a current schedule and the current agent's preference for that factor; assigning the difference value for each factor to a bit range within a vector for the current agent and current schedule, wherein the factor having the highest importance is assigned to a highest order bits of the vector and remaining factors are assigned to subsequent orders of bits in an assigned order of importance, wherein the vector represents a numerical value that indicates how well the current schedule fits the current agent's preferences, and assigning to the current agent the schedule having the lowest numerical value.

Andre et al disclose improving an agent schedule by swapping shift patterns, completely un-scheduling an agent, using a score for evaluating the desirability of a schedule. However, Andre et al does not disclose performing the following sub-steps on an iterative basis, from a highest ranked agent to a lowest ranked agent: for each agent that is available to be assigned to a current agent, performing the following substeps: for the current agent, for each factor, determining a difference value between a current schedule and the current agent's preference for that factor; assigning the difference value for each factor to a bit range within a vector for the current agent and current schedule, wherein the factor having the highest importance is assigned to a highest order bits of the vector and remaining factors are assigned to subsequent orders of bits in an assigned order of importance, wherein the vector represents a numerical value that indicates how well the current schedule fits the current agent's preferences, and assigning to the current agent the schedule having the lowest numerical value.

Fields et al disclose generating optimum staff schedules that take into account the tasks that need to be scheduled, skill level of employees, employee availability, and employee priority and seniority level. However, Fields et al does not disclose performing the following sub-steps on an iterative basis, from a highest ranked agent to a lowest ranked agent: for each agent that is available to be assigned to a current agent, performing the following substeps: for the current agent, for each factor, determining a difference value between a current schedule and the current agent's preference for that factor; assigning the difference value for each factor to a bit

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range within a vector for the current agent and current schedule, wherein the factor having the highest importance is assigned to a highest order bits of the vector and remaining factors are assigned to subsequent orders of bits in an assigned order of importance, wherein the vector represents a numerical value that indicates how well the current schedule fits the current agent's preferences, and assigning to the current agent the schedule having the lowest numerical value.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre Boyce whose telephone number is (571) 272-6726. The examiner can normally be reached on 9:30-6pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



adb

December 22, 2005



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